Ecosystem Web Infographic  
Ecosystems Unit Project - Fall 2014

**Overview**

This project will allow students to draw connections between many of the concepts we have studied in our Ecosystems unit including food webs, symbiosis, population dynamics, nutrient cycling and habitats. Students will create an ecosystem web of our TOLC by identifying and researching native organisms then creating a visual representation of how energy, water, nitrogen, and carbon flow through our TOLC’s ecosystem.

**Procedures**

1. In groups of 3, students will be assigned a type of organism to find and identify in our TOLC. The **Identification Groups** will be as follows:
   1. **Birds, Mammals, Reptiles, Amphibians**: Stephen, Haizlee, Kameron, Cesar
   2. **Plants**: Trevon, Haley, Sutherlan
   3. **Fungi**: Samuel, Caleb, Chloe
   4. **Arthropods**: Valen, JT, Ayana
2. Identification groups will research the following characteristics of each plant or animal:
   1. **Food**: What does it eat?
   2. **Predators / Consumers**: What eats it?
   3. **Interactions**: What other species interact with it?
   4. **Habitat**: Where does it live? How does it get water, shelter, and mates?
   5. **Limiting factors**: What are the resources that could limit this organism’s population in our region?
   6. **Nutrient / water cycle roles**: How does this organism participate in the nitrogen, carbon, and water cycle?
3. A student from each identification group will then be assigned to an **Infographic Group** where they will share their findings and be the “expert” on their type of organism. The groups will be as follows:
   1. **Group 1**: Stephen, Kameron, Trevon, Valen, Chloe
   2. **Group 2**: Haizlee, Sutherlan, Caleb, JT
   3. **Group 3**: Cesar, Haley, Samuel, Ayana
4. Each group will **create an ecosystem web** using the 12 organisms the class has identified. The webs will show the following:
   1. Arrows indicating how energy flows (e.g. from tree to squirrel and from squirrel to owl, etc.). Each organism can have multiple arrows going to and from it.
   2. Arrows indicating how nutrients (nitrogen, carbon, and oxygen) and water flow between organisms and abiotic factors in the ecosystem as well
   3. Next to the arrows, indicate the following
      1. Any symbiotic interactions between the two species
      2. How the energy is transferred (e.g. predation, consumption, decomposition, etc.)
   4. Next to each organism, indicate the following
      1. Habitat preferences
      2. At least 2 limiting factors on their population in the TOLC
      3. How the organism reproduces and / or spreads
5. Each group will present their web to the class in a 5-8 minute presentation where every group member has to speak about one part of the web.

**Grading Criteria:** Participation, Group Evaluations, Accuracy, Presentations, Effort, and Clarity of final product

**Due Dates:**

* Tuesday, 9/2: Have 3 identified organisms and begin taking notes on each
* Wednesday, 9/3: Research organisms and begin poster or electronic version of visual
* Thursday, 9/4: Finish visual aid
* Friday, 9/5: Presentations, assessment, and evaluations